IUGA Fellowship Development Curricula Topic Guide

Structure of topics

a) CORE KNOWLEDGE
   i) Evaluation
      (a) -Understanding Anatomy & Physiology
      (b) -Evaluating symptoms, severity & bother
      (c) -Assess Precipitating factors and Lifestyle modifications
      (d) -Evaluating signs & symptoms in physical exam
   ii) Diagnosis | Physical Exam
   iii) Diagnostic Tools

b) TREATMENT OPTIONS: Office based | Surgical

Order of topics

<u>Pelvic Floor & Organ Anatomy & Physiology*</u>

a) Core Knowledge
   i) To discuss and correlate the anatomy of the pelvis and pelvic organs, and the pathophysiological processes affecting their function and development.
      (1) Anatomy:
      a. The bony scaffolding consisting of ilium, ischium and pubis
      b. Pelvic viscera
      c. The pelvic floor diaphragm and perineum
      d. Levator Complex
      e. Endopelvic Fascia and connective tissue
      f. Urethra
      g. f. Uterus and its supports
   ii) To discuss and correlate the physiology of pelvic organ prolapse and pathophysiological process affecting their function and development
      (1) Physiology:
         (a) Describe physiology of pelvic floor and its viscera
         (b) Describe predisposing physiological factors leading to the pelvic organ prolapse
         (c) Describe neurophysiology of pelvic floor
         (d) Describe effect of pelvic organ prolapse on voiding and defecatory function
b) PHYSICAL EXAM
   i) Evaluation:
      (1) POP Q exam and POP Staging
      (2) Use of imaging techniques such as ultrasound, CT and MRI when necessary
   ii) To be able to discuss/explain relevant anatomical structures during patient exam
   iii) To be able to discuss/explain pelvic organ prolapse and its implications to the physiology of pelvic floor

Pelvic Organ Prolapse

c) Core Knowledge

i) EVALUATION

(a) -Understanding Anatomy & Physiology of Prolapse

(b) -Evaluating symptoms, severity & bother

(i) Evaluation of prolapse symptom severity and bother (questionnaires)

(ii) Evaluation of urinary symptoms and severity and bother

(iii) Evaluation of bowel symptoms and severity and bother

(c) -Assess Precipitating factors and Lifestyle modifications

(d) Assess Structural; anatomic, and congenital malformations

(e) Determine psychosocial & psychosexual effects of POP

(f) Determine prior treatments, patient's response and patient preferences

(g) Describe the considerations in planning prolapse surgery, focusing on the indications for intraoperative sequencing of combined procedures (listed below)

(h) -Evaluating signs & symptoms in physical exam

ii) DIAGNOSES | PHYSICAL EXAM

(1) POPQ

(2) Urethral mobility

(3) Reduction Cough Stress Test

(4) Post void residual

(5) The Delancey Theory- levels of support

(6) The Integral Theory of Pelvic support system-P-Petros

iii) DIAGNOSTIC TOOLS

(1) Understand the use and diagnostic modalities of Pelvic floor ultrasound

(2) Understand the use and diagnostic modalities of MRI

d) TREATMENT OPTIONS: Office based

i) Discuss the evidence, indications and efficacy of pelvic floor physical therapy in prolapse care

ii) Discuss the role of estrogen replacement therapy (systemic vs. local) in women using pessary for prolapse.

iii) List factors which impact successful pessary fitting for prolapse, including: stage, genital hiatus, vaginal length,

iv) Pessary fitting and management for prolapse

1. Ring with and without support
2. Gellhorn
3. Donut
4. Gehrung
5. Lever
6. Cube
7. Inflatable

e) TREATMENT OPTIONS: Surgical

i) Core Procedures:

1. Uterosacral ligament suspension
2. Sacrospinous ligament suspension/fixation
3. McCall's culdoplasty
4. Iliococcygeus suspension/fixation
5. Colpocleisis (LeForts, complete vaginectomy)
6. Hysteropexy
7. Anterior colporrhaphy
8. Posterior colporrhaphy
9. Defect-specific posterior repair
10. Perineorrhaphy
11. Levatorplasty
12. Paravaginal repair

ii) Advanced Procedures:

13. Laparoscopic approach to native tissue prolapse repair (conventional, VNOTE, Robotic)
14. Sacrocolpopexy (open, laparoscopic, robotic)
15. Transvaginal mesh procedures (absorbable, non-absorbable, biologics)
16. Anterior vaginal repair with graft (anchored and non-anchored implants)
17. Trans-anal posterior repair
18. Manchester operation

Urinary Incontinence

f) Core Knowledge

i) EVALUATION

(a) -Understanding anatomy & pathophysiology, diagnosis for:
  (i) stress urinary incontinence
  (ii) urgency urinary incontinence and overactive bladder
  (iii) mixed urinary incontinence
  (iv) overflow incontinence

(b) -To identify, evaluate and manage (or refer when appropriate) complications associated with incontinence surgery, including: cystotomy, fistula, persistent/recurrent incontinence, voiding dysfunction/retention, mesh exposure/erosion, sexual dysfunction, urinary urgency

(c) -Evaluating symptoms, severity & bother
  (i) Assess severity of symptoms with history (past medical, obstetrical, surgical, medications that may contribute to incontinence)
  (ii) degree of bother, including condition specific and quality of life questionnaires
  (iii) bladder diary
  (iv) evaluate other organ systems and their effect on LUTS function
(d) -Assess Precipitating factors and Lifestyle modifications
  (i) To understand, demonstrate knowledge in, and counsel patient regarding functional factors related to urinary incontinence (mobility, obesity, dementia, constipation, hyperglycemia, medications, Obstructive Sleep Apnea)
  (ii) To understand, demonstrate knowledge in, and counsel patients regarding behavioral and conservative treatment of urinary incontinence
    1. Timed voiding and bladder retraining
    2. Pelvic floor muscle training and physical therapy
    3. Biofeedback
    4. Electrical stimulation
    5. Incontinence devices (incontinence pessary, intra-vaginal inserts, urethral inserts, catheters)
    6. absorbent products

ii) DIAGNOSES | PHYSICAL EXAM
  (1) Evaluating signs & symptoms in physical exam
  (2) neurologic status (pelvic floor reflexes, sensation and strength)
  (3) pelvic floor muscle tone and strength
  (4) assess pelvic floor support and evaluate for prolapse and its effect on urinary incontinence
  (5) urethral mobility
  (6) assess for structural, anatomic and congenital malformations
  (7) cough stress test to evaluate for stress incontinence

iii) DIAGNOSTIC TOOLS
  (1) Simple single channel Urodynamics
  (2) Video urodynamics
  (3) Complex multi-channel Urodynamics
    (a) Leak point pressure testing
    (b) Urethral pressure profilometry
    (c) Neurophysiologic studies (electromyography)
    (d) Uroflowmetry and pressure flow studies
  (4) Urine laboratory studies: urine microscopy and culture
  (5) assess urinary residual (bladder scan or by catheter)
  (6) Cystourethroscopy (rigid and flexible)

g) TREATMENT OPTIONS: Urge urinary incontinence |Overactive Bladder (OAB)

i) To understand and demonstrate knowledge in pharmacologic treatment of urge incontinence (including ant-muscarinic, beta-3 agonists, tricyclic antidepressants, SSRI, neurotoxins)
   (1) indications and contraindications
   (2) safe and effective doses
   (3) rates of effectiveness based on medical evidence
   (4) side effects and prevalence
      (a) rates of compliance and discontinuation

h) TREATMENT OPTIONS: **Office based**

i) have knowledge, levels and evidence for use, indications, complications, success rates and techniques for the following stress & Urge urinary incontinence procedures:

ii) STRESS Urinary incontinence
   (1) Urethral bulking injections
   (2) Incontinence pessary fitting, insertion, & management

iii) Urge Urinary incontinence
   (1) Intradetrusor botox injections
   (2) Percutaneous tibial nerve stimulation

i) TREATMENT OPTIONS: **Surgical**

i) Stress Urinary incontinence
   (1) Midurethral mesh sling
      (a) retropubic
      (b) trans obturator
      (c) single incision
   (2) Autologous fascial sling | Pubovaginal sling (rectus fascia, fascia lata, allografts)
   (3) Urethral bulking injections
   (4) Colpo suspension/retropubic urethropexy (open or minimally invasive)
   (5) Kelly plication
   (6) Needle suspension procedures (Stamey, Raz, Pereyra)
   (7) Artificial urinary sphincter

ii) Management of intraoperative bladder injury and cystotomy closure, ureteral stents

iii) Urge urinary incontinence
   (1) Sacral neuromodulation
   (2) Cysto detrusor Botox injection
   (3) Bladder diversion/Augmentation cystoplasty

<u>Painful bladder syndrome</u>

j) Core Knowledge

i) EVALUATION
   (a) -Understanding Anatomy & Physiology
   (b) -Evaluating symptoms, severity & bother
   (c) -Assess Precipitating factors and Lifestyle modifications
      (i) Diagnose Painful Bladder Syndrome

(ii) Review treatment algorithm with the patient and explain available treatment options
(iii) Discuss risks and benefits of each treatment option
(d) -Evaluating signs & symptoms in physical exam

ii) DIAGNOSIS | PHYSICAL EXAM
(1) Interpret results appropriate for painful bladder investigations such as bladder diary/voiding charts, Cystourethroscopy

iii) DIAGNOSTIC TOOLS
(1) Frequency/Volume chart
(2) Post void residual
(3) Urodynamics
(4) UA/Urine culture
(5) Cytology (esp. if smoking)
(6) Symptom questionnaire
(7) Pain evaluation
(8) Perform and interpret the results of selected tests to diagnose and treat painful bladder syndrome:
(9) Imaging
(10) Cystoscopy with or without biopsy
(11) Laparoscopy

k) TREATMENT OPTIONS: Office based | Surgical
i) Understand and implement 1st ,2nd,3rd,4th, & 5th line treatment algorithim options
ii) Procedural
a. Cystourethroscopy (w and w/o hydrodistension)
b. Bladder injections/ treatment of Hunner's lesions/ Botox injections
c. Bladder installations
d. Neuromodulation

Lower urinary tract symptoms (Recurrent UTI | Microscopic Hematuria)

l) Core Knowledge
i) EVALUATION
(a) Obtain patient history and diagnose
(b) Distinguish pathophysiology, including host factors, for lower and upper urinary tract infections
(c) Describe diagnostic methods and diagnostic criteria for UTIs
(i) Asymptomatic bacteriuria
(ii) Uncomplicated UTI
(iii) Complicated UTI
(iv) Recurrent UTI
(v) Persistent UTI
(vi) Multi-drug resistant organisms
(d) -Evaluating symptoms, severity & bother

(e) -Assess Precipitating factors and Lifestyle modifications
(f) -Evaluating signs & symptoms in physical exam

ii) DIAGNOSIS | PHYSICAL EXAM
(1) Evaluating signs & symptoms in physical exam
(2) assess for structural, anatomic and congenital malformations

iii) DIAGNOSTIC TOOLS
(1) Post void residual
(2) UA/Urine culture
(3) Cytology (esp. if smoking)
(4) Symptom questionnaire
(5) Imaging (Renal U/S, CT abd/pelvis)
(6) Cystoscopy with or without biopsy

m) TREATMENT OPTIONS: Office based | Surgical
i) Conservative Management:
(1) Antibiotics
(a) Short term therapy (3 days)
(b) Longer term therapy (7-10 days)
(c) Prophylactic treatment- periodic vs post coital
(2) Non-microbial agents
(a) D-Mannose
(b) Cranberry Extract
(c) Vaginal Estrogen cream
(3) Probiotics
(4) Addressing modifiable risk factors
ii) Procedural
(1) fecal transplant (investigative treatment)*

Neuro-urology | Urinary retention

n) Core Knowledge: **Neurourology**
 i) Neural pathways and physiology of normal bladder storage and voiding
 ii) Patterns of lower urinary tract dysfunction following neurological disease
 iii) Suprapontine lesions (predominantly storage symptoms)
 iv) Spinal (infrapontine-suprasacral) lesions (both storage and voiding symptoms)
 v) Sacral/infrasacral lesions (predominately voiding symptoms)
 vi) Fowlers Syndrome
o) Urodynamic Characteristics of the above neurological diseases
p) Suprapontine lesions
q) Spinal Lesions (e.g. Detrusor Sphincter Dyssynergia)
r) Sacral/Infrasacral lesions
s) Neurophysiological Tests
 i) Electromyography- basic theory, choice of electrode, partial denervation
 ii) Pudendal Nerve Terminal Motor Latency- potential uses, technique and normal ranges
t) Protection of the Upper Urinary Tract
 i) achievement (or maintenance) of urinary continence
 ii) restoration of LUT function
u) improvement of the patient's QoL.
 i) Identifying those needing Self-Catheterisation/ Suprapubic Catheter insertion
 EVALUATION-Neurourology
  (a) -Understanding Anatomy & Physiology
  (b) -Evaluating symptoms, severity & bother
  (c) -Assess Precipitating factors and Lifestyle modifications
  (d) -Evaluating signs & symptoms in physical exam
 ii) DIAGNOSES | PHYSICAL EXAM
  (1) Detailed clinical examination with full neurological exam
  (2) Lumbosacral dermatomes, myotomes, cutaneous nerves, and reflexes
  (3) Sensation (both sides)
  (4) Reflexes
  (5) Anal sphincter tone
  (6) Post void residual
 iii) DIAGNOSTIC TOOLS
  (1) Urodynamics
  (2) EMG
  (3) Pudendal Nerve Terminal Motor Latency
  (4) Neurophysiologic Testing

v) TREATMENT OPTIONS: Office based
 i) Clean intermittent Catheterization
 ii) Cystoscopy BOTOX
w) TREATMENT OPTIONS: Office based | Surgical

i) Neuromodulation
ii) Urinary Diversion Procedures

x) Core Knowledge : **Urinary Retention**

i) EVALUATION
   (a) -Understanding anatomy & physiology, neuro-urology and function related to urinary retention
   (b) Obtain relevant history, including current medical conditions and past surgeries as well as use of medications and over-the-counter supplements
   (c) -Evaluating symptoms, severity & bother
   (d) -Assess Precipitating factors and Lifestyle modifications and risk factors for urinary retention
   (e) -Evaluating signs & symptoms in physical exam

ii) DIAGNOSIS | PHYSICAL EXAM
   (1) Complete abdominal exam
   (2) Complete pelvic exam including neurologic evaluation to assess strength, sensation, muscle tone, and reflexes relative to lower thoracic, lumbar, and sacral spinal levels
   (3) Assessing and measuring post-void residuals

iii) DIAGNOSTIC TOOLS
   (1) Laboratory testing - UA, BUN, Creatinine, Electrolytes, Blood glucose
   (2) Imaging studies - MRI of spine, MRI or CT scan of brain, Pelvic ultrasound or CT abdo/pelvis, Renal and Bladder ultrasound
   (3) Cystourethroscopy, CT urogram
   (4) Urodynamics

y) TREATMENT OPTIONS: Office based | Surgical
i) Suprapubic catheter placement
ii) Teaching clean intermittent self-catheterisation

Bowel Dysfunction- Fecal incontinence | Defecatory Dysfunction

1. Core Knowledge
   i. EVALUATION
      a. *-Understanding Anatomy & Physiology*
         i. Anatomy of large and small bowel, rectum, internal and external sphincters anatomy.
         ii. Understanding physiology of normal defecation.

      b. *Evaluating symptoms, severity & bother*

i. Evaluation of bowel symptom duration, severity, frequency and bother (bowel diaries, condition-specific bother and quality of life questionnaires); include fecal incontinence associated symptoms (diarrhea, fecal urgency, constipation, impaction, or defecatory problems)
ii. Understanding stool consistency and its evaluation

c. *Assess Precipitating factors and Lifestyle modifications*
    i. Evaluate diet and fiber intake
    ii. Evaluate medical and surgical history and its possible contribution to the problem (hx of IBS, motility disorders, inflammatory bowel disorders)
    iii. Evaluate psychosocial and psychosexual
d. -Evaluating signs & symptoms in physical exam

ii. <u>DIAGNOSES | PHYSICAL EXAM</u>
1. Physical examination techniques to characterize fecal incontinence, perform, and demonstrate interpretation of: (PC)
    a. Neuromuscular examination including assessment of pelvic floor muscle and anal sphincter tone and strength, pelvic floor reflexes, and perineal and anal sensory functionn
    b. Identification of anal fistula, fissures, or scarring, perineal descent, rectal prolapse, haemorrhoids, tumour, and anal sphincter disruptions

iii. <u>DIAGNOSTIC TOOLS</u>

1. Identifies available modalities and indications for investigating the gastrointestinal tract, makes appropriate requests and interprets results.
2. Interprets results appropriately for gastrointestinal tract investigations, including:
3. Endoanal ultrasound
4. Defaecating proctogram / MRI
5. Barium enema
6. Contrast CT colon / Colonoscopy
7. Investigations and principles of treatment of enteric fistulae, including those involving bladder, vagina, anus or perineum

2. TREATMENT OPTIONS:
    i. Office based
        1. Behavioral interventions
        2. Dietary changes
        3. Pelvic floor Muscle exercises
        4. Biofeedback
        5. Electrical stimulation
        6. Enemas
        7. Other behavioral interventions
        8. Pharmacologic interventions
        9. Altering intestinal transit
        10. Bile salt binding medication
        11. PTNS use

    ii. <u>Surgical</u>
        1. Sphincteroplasty
        2. Neuromodulation
        3. Use of bulking agents

Obstetrical Anal Sphincter Injury (OASIS)

a. Core Knowledge
    i. EVALUATION
        1. Understanding Anatomy and Physiology
            a. Describe external and internal anal sphincter anatomy
            b. Understand internal and external anal sphincter physiology
            c. Describe fecal continence mechanism
            d. Describe pelvic floor trauma events that can lead to sphincter destruction
        2. Evaluating symptoms, severity and bother
            a. Describe physical exam evaluation
            b. Evaluate using validated questionnaires

    ii. DIAGNOSIS / PHYSICAL EXAM
        1. Physical exam including anal and vaginal exam
        2. Access levator muscle complex and pelvic floor for other pelvic floor trauma

    iii. DIAGNOSTIC TOOLS
        1. Endoanal ultrasound/Transperineal ultrasound
        2. MRI
        3. Pelvic Floor Distress Inventory Questionnaire (CRADI - 8 part), Wexner Score, St. Mark's Score

b. Treatment options
    i. Conservative
        1. Optimize stool consistency
        2. Review use of fiber
        3. Eclipse pessary for fecal incontinence
        4. Pelvic floor Physical therapy

    ii. Surgical
        1. Sphincteroplasty
           overlapping or end to end
        2. Sacral neuromodulation

Female Sexual Function

a. Core Knowledge
    i. EVALUATION
        a. Understanding Anatomy & Physiology
            i. Describe female detailed anatomy as it related to sexual function
            ii. Describe sexual response cycle and its components (desire, arousal, orgasm, and resolution)

        b. Evaluating symptoms, severity & bother
            i. Review anatomical concerns that could be affecting sexual function (recently post partum period, menopause, pelvic surgery, medical and surgical co-morbidities.)
            ii. Review variable sexual disorders in female patients:
                1. Female Sexual Interest/Arousal Disorder
                2. Sexual Aversion Disorder
                3. Female Orgasmic Disorder
                4. Sexual pain disorder (dyspareunia, vaginismus)

        c. Assess Precipitating factors and Lifestyle modifications
            i. Review complete medical and surgical history
            ii. Review sexual history
            iii. Review psychosocial factors that could be affecting sexual health

        d. Evaluating signs & symptoms in physical exam

    ii. DIAGNOSIS | PHYSICAL EXAM
        1. Physical exam including levator muscle evaluation
        2. Examine vaginal tissue quality
        3. Use Brief Sexual Symptom Checklist for Women to get better assessment of patient' condition

    iii. DIAGNOSTIC TOOLS
        1. Pelvic Organ Prolapse/Urinary Incontinence Sexual Questionnaire (PISQ-12 questionnaires)

b. TREATMENT OPTIONS:

i. Physical

1. Treatment of underlying medical condition
2. Pelvic floor physical therapy
3. Treatment with medications and/or injections (vaginal estrogens and its derivatives, lubricants etc)
4. Use of vaginal devices such as vibrator

ii. Emotional

1. Stress/Fatigue management
2. Relationship issues
3. Partner sexual dysfunction
4. History of trauma and anxiety
5. Psychological/sexual therapy and counselling
6. Couples counseling

iii. Medical

1. Review all medications used and their possible side effects
2. Stop possible triggers
3. Collaborate with patient's medical team to provide educational resources

iv. Educational

1. provide educational resources for the patients
2. educate patients about anatomy
3. educate patient about sexual reponses

Pelvic Pain & Pelvic Floor Muscle dysfunction

c. Core Knowledge
    i. EVALUATION
        a. Understand the pathophysiology of peripheral and central pain mechanisms and use a multidisciplinary approach
            i. Lower urinary tract domain
                1. Bladder pain syndrome/Interstitial cystitis
            ii. Female genital tract domain
                1. Vulvar pain syndrome
                2. Vestibular pain syndrome
                3. Clitoral pain syndrome
            iii. Gastro-Intestinal domain
                1. Anorectal pain
                2. Colorectal pain
                3. Irritable bowel syndrome
            iv. Musculoskeletal domain
                1. Pelvic muscle pain syndrome
                2. Coccyx pain syndrome
                3. Pelvic joint, ligament, bony pain
            v. Neurological domain
                1. Somatic neuropathic pain
                2. Complex regional pain syndrome
            vi. Psychological domain
                1. Anxiety, Depression
                2. Catastrophizing
            vii. Sexual domain
                1. Sexual dysfunction
                2. Persistent genital arousal disorder
                3. Genito-pelvic pain/penetration disorder
            viii. Gynaecological system: internal pelvic pain syndromes
                1. Chronic pelvic pain syndrome
                2. Endometriosis associated pain syndrome
                3. Dysmenorrhea
            ix. Co-morbidities
                1. Systemic auto-immune diseases
                2. Low back pain

        b. Evaluating symptoms, severity & bother
            i. Through careful history try to determine which one of the above mentioned factors could be contributing to patient's symptoms
            ii. Review severity of condition and bother level

c. Assess Precipitating factors and Lifestyle modifications
    i. Determine which factors exacerbate pain and which factors relieve pain
    ii. Review diet, urinary and bowel habits and well as sexual function
    iii.
d. Evaluating signs & symptoms in physical exam
    i. Patient's ability to tolerate pelvic exam

ii. DIAGNOSES | PHYSICAL EXAM
    1. History taking in patients with pelvic floor dysfunction/ chronic pelvic pain
    2. Psychological screening
    3. Screening for emotional/physical/sexual abuse
    4. Detailed clinical examination with pain mapping

iii. DIAGNOSTIC TOOLS
    1. Understand the multidimensional nature of pain and use a patient-centred biopsychosocial approach
    2. Quality of life questionnaires
    3. Pelvic ultrasound
    4. Mid stream urine sample
    5. CT/MRI scan
    6. Cystoscopy +/- Biopsy
    7. Laparoscopy +/- Biopsy
    8. Urodynamics

d. TREATMENT OPTIONS: Office based | Surgical
    i. Referal for pelvic floor Physical therapy with/without biofeedback
    ii. Initial prescribing of neuroleptic medication e.g., Amitriptyline, Gabapentin, Opioids
    iii. Nerve block
    iv. Botox to the bladder or pelvic floor muscles
    v. Mesh/foreign body removal if present

Fistulae and urethral diverticula

e. Core Knowledge
   i. EVALUATION
      a. Understanding Anatomy & Physiology
         i. Review anatomy of urethral diverticula
         ii. Review possible anatomical locations for genitourinary fistulae (vesicovaginal, ureterovaginal, urethrovaginal)

      b. Evaluating symptoms, severity & bother
         i. Review signs of symptoms of urethral diverticulum (recurrent UTI, dribbling dyspareunia, dysuria)
         ii. Review genitourinary fistula symptoms, extent of bother and complications that it might be causing

      c. Assess Precipitating factors and Lifestyle modifications
         i. Review factors that could lead to urethral diverticula and level of bother
         ii. Review genitourinary fistula, its affect on patient's well being and level of bother
         iii. Carefully review lifestyle modifications that patients will both above mentioned conditions have to make in order to have better quality of life

   ii. DIAGNOSIS | PHYSICAL EXAM
      1. Detailed genitorurinary physical exam including UA, UC
      2.
   iii. DIAGNOSTIC TOOLS
      1. Perform and interpret the results of selected tests to diagnose urethral diverticula:

a. Cystourethroscopy
b. Double-balloon catheter
c. Ultrasound
d. MRI/ CT

f. Perform and interpret the result of selected tests of diagnose genitourinary fistule
    a. Vaginal tampon test
    b. Cystourethroscopy
    c. MRI/CT urogram
    d. Investigations of gastrointestinal tract:
        i. Anorectal function studies
        ii. Barium enema
        iii. Contrast CT colon
        iv. Colonoscopy
        v. Defaecating proctogram
    e.

g. TREATMENT OPTIONS: Office based | Surgical
    i. Surgical
        1. The operative techniques to repair Urethral diverticula and impact of location and etiology on technique.
            a. Urethral diverticulectomy
            b. Spence procedure
            c. The evidence for use, indications, complications, success rates and technical performance: (MK, PC, PBLI)
                i. Timing of repair
                ii. Success rates
                iii. Persistent urinary symptoms
                iv. Preoperative and postoperative care for urethrovaginal fistula.
                v. Postoperative bladder drainage
        2. Management option(s) for urethral diverticula and concomitant stress urinary incontinence.
        3. The indicated procedures, technical performance, complication rates and success rates of SUI correction at the time of urethral diverticulectomy.
        4. The operative techniques to repair rectovaginal fistula and impact of location and etiology on technique.
            a. Martius graft
            b. Peritoneal grafts
            c. Cutaneous flaps

5. Procedures for Vesicovaginal fistulas.
    a. Abdominal (open and minimally invasive), trans vesical, and vaginal vesicovaginal fistula repairs
    b. Interpositional graft (e.g., martius, omental)

6. Procedures for Ureterovaginal/ Uretero-uterus fistulas
    a. Ureteroneocystostomy
    b. Ureteroureterostomy
    c. Percutaneous nephrostomy tube
    d. Boari flap
    e. Psoas hitch

Augmenting Surgical Materials

1. Discuss different types of graft materials using in prolapse and incontinence surgery, including graft properties, advantages, and risks associated with each graft:
    a. Autograft
    b. Allograft
    c. Xenograft
    d. Synthetic graft
2. Discuss relevant characteristics (pore size, filament type, flexibility, tensile strength) of augmenting surgical materials. (MK)
3. Discuss the level of evidence (success and complications) for the use of augmenting surgical materials for prolapse and incontinence surgery. (MK, PBLI)
4. Bulking agents: Discuss types, indication for use, injection techniques (GL)

Symptom Severity & Quality of Life Measures*

h. Core Knowledge

1. Symptom Severity and Quality of life questionnaires:

i. Pelvic floor distress inventory (PFDI - 20)
    a. Urinary distress inventory (UDI-6)
    b. Pelvic organ prolapse distress inventory (POPDI-6)
    c. Colorectal-Anal distress inventory 8 (CRADI-8)

ii. International Consultation on Incontinence Questionnaire (ICIQ)

iii. Kings Health Questionnaire

iv. Patient Global impression of Severity Scale (PGI-S)

iv. Pelvic organ prolapse/urinary incontinence sexual questionnaire (PISQ)

2. Familiarize physicians with above mentioned questionnaires and its use

Research Core Curricula*

i. Core Knowledge

1. Defines characteristics of good research question
2. Demonstrates process of designing and conducting research process in order to formulate and answer research question
3. Demonstrates knowledge of research design types
4. Demonstrates knowledge of basic biostatistics and data analytic techniques
5. Demonstrates knowledge of research engines in order to perform scientific literature search
6. Learns about research protocol design and execution
7. Learn to specify a practical and appropriate timeline for accomplishing tasks required to complete a research study
8. Develops relationship with research mentor and collaborators
9. Identify and describe the ethical principles that serve as the foundation for the following clinical interactions and professional responsibilities.
10. Identify and describe the ethical principles that serve as the foundation for the following clinical interactions and professional responsibilities.
11. Define key principles and identify resources for definitive information about legal issues relevant to gynecologists, such as informed consent and HIPAA regulations.
12. Conducts research according to the highest ethical standards.
13. Discuss the ethics of research, including subject recruitment, informed consent, patient privacy, and the role of institutional review boards

*Data obtained from “A Longitudinal Residency Research Curriculum" by Abramson et al 2013